

THE AMENDMENTS

In the Claims

1-52. (cancelled)

53. (currently amended)

A process for the preparation of a plurality of well-defined structures, said process comprises the following steps, not necessarily in the order as listed:

- (a) providing a support web;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern corresponding in form to at least one of said well-defined structures;
- (d) aligning said photomask loop with said support web so that at least a portion of said photomask loop is in generally parallel orientation to at least a portion of said support web;
- (e) ~~selectively exposing at least a portion of said radiation curable material to radiation through said photomask, leaving at least a portion of said radiation curable material unexposed;~~
- (f) moving said photomask loop and said support web in a synchronized motion so that at least a portion of said photomask loop and at least a portion of said support web are moving in parallel in substantially the same direction;
- (f) passing radiation through a portion of said photomask loop onto the radiation curable material on a portion of said support web, which is in generally parallel orientation to said portion of said photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material and leaving another portion of said radiation curable material unexposed; and
- (g) removing said unexposed radiation curable material to form a plurality of said well-defined structures.

54. (previously presented)

The process of Claim 53 wherein said photomask loop and said support web are moving at substantially the same speed.

55. (currently amended)

A process for the preparation of a plurality of microcups, which process comprises the following steps, not necessarily in the order listed:

- (a) providing a support web which comprises a plurality of conductor lines for addressing said microcups;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern corresponding in form to at least one of said microcups;
- (d) ~~selectively exposing at least a portion of said radiation curable material to radiation through said photomask loop, leaving at least a portion of said radiation curable material unexposed passing radiation through a portion of said photomask loop onto the radiation curable material on a portion of said support web, which is in generally parallel orientation to said portion of said photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material and leaving another portion of said radiation curable material unexposed; and~~
- (e) removing said unexposed radiation curable material so as to form a plurality of said microcups.

56. (currently amended)

The process of Claim 55 further comprising filling said microcups with an electrophoretic display pigment/solvent composition or a liquid crystal display composition and sealing said filled microcups.

57. (currently amended)

The process of Claim 56 wherein said step of filling comprises filling substantially all of said microcups with a single electrophoretic display pigment/solvent composition or a liquid crystal display composition to form a monochrome display.

58. (currently amended)

The process of Claim 56 wherein said step of filling comprises filling said microcups with different electrophoretic display pigment/solvent compositions or different liquid crystal display compositions to form a multi-color display.

59. (currently amended)

A process for the preparation of a plurality of well-defined structures, said process comprises the following steps, not necessarily in the order as listed:

- (a) providing a support web which comprises a plurality of elements;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity;
- (d) aligning at least a portion of said photomask loop and at least a portion of said support web in a manner that said areas of opacity correspond to said elements on said support web;
- (e) ~~selectively exposing at least a portion of said radiation curable material through said areas of transparency of said photomask loop, leaving at least a portion of said radiation curable material unexposed;~~
- (f) moving said photomask loop and said support web in a synchronized motion so as to maintain a predetermined spatial relationship between at least a portion of said photomask loop and at least a portion of said support web wherein said synchronized motion comprises moving at least a portion of said photomask loop and at least a portion of said support web in parallel in substantially the same direction;
- (g) passing radiation through a portion of said photomask loop onto the radiation curable material on a portion of said support web, which is in generally parallel orientation to said portion of said photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material through said areas of

transparency of said photomask loop and leaving another portion of said radiation curable material corresponding to said areas of opacity of said photomask loop unexposed; and

- (g) removing said unexposed radiation curable material to form a plurality of said well-defined structures.

60. (previously presented)

The process of Claim 59 wherein said photomask loop and said support web are moving at substantially the same speed.

61. (previously presented)

The process of Claim 60 wherein said photomask loop and said support web are moving at a constant speed.

62. (previously presented)

The process of Claim 59 wherein steps (e) and (f) are carried out simultaneously.

63. (previously presented)

The process of Claim 59 wherein step (b) is carried out continuously.

64. (previously presented)

The process of Claim 59 wherein step (e) is carried out continuously.

65. (previously presented)

The process of Claim 59 wherein step (f) is carried out continuously.

66. (previously presented)

The process of Claim 59 further comprising the following steps:

- (i) detecting one of said elements or a pre-formed marker on said support web;
- (ii) detecting one of said areas of opacity or a pre-formed marker on said photomask loop; and
- (iii) controlling the motion of said support web and said photomask loop in response to steps (i) and (ii) so as to bring at least a portion of said support web into said predetermined spatial relationship with at least a portion of said photomask loop.

67. (currently amended)

A process for the preparation of microcups which process comprises the following steps, not necessarily in the order listed:

- (a) providing a support web which comprises a plurality of conductor lines for addressing said microcups;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to wall structure of said microcups;
- (d) aligning at least a portion of said photomask loop and at least a portion of said support web in a manner that said areas of opacity correspond to said conductor lines on said support web;
- (e) ~~selectively exposing at least a portion of said radiation curable material through said areas of transparency of said photomask loop, leaving at least a portion of said radiation curable material corresponding to areas of opacity of said photomask loop unexposed; and~~
- (f) moving said photomask loop and said support web in a synchronized motion so as to maintain a predetermined spatial relationship between at least a portion of said photomask loop and at least a portion of said support web;
- (g) passing radiation through a portion of said photomask loop onto the radiation curable material on a portion of said support web, which is in generally parallel orientation to said portion of said photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material through said areas of transparency of said photomask loop and leaving another portion of said radiation curable material corresponding to said areas of opacity of said photomask loop unexposed; and

(g) removing said unexposed radiation curable material to form said microcups.

68. (canceled)

69. (currently amended)

The process of Claim 67 ~~68~~-which step of removing said unexposed radiation curable material is carried out continuously.

70. (previously presented)

The process of Claim 55 wherein said conductor lines are transparent to visible light.

71. (previously presented)

The process of Claim 67 wherein said conductor lines are transparent to visible light.

72. (currently amended)

A process for the preparation of a multi-color display, which process comprises:

- (a) providing a support web which comprises a plurality of pre-formed microcups with top openings;
- (b) laminating a layer of a radiation curable material over said top openings of said microcups;
- (c) providing a first photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a first pre-selected subset of microcups;
- (d) selectively exposing said radiation curable material to radiation through said photomask loop passing radiation through a portion of said first photomask loop onto the radiation curable material laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said portion of said first photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material and leaving another portion of said radiation curable material unexposed; and

- (e) removing said exposed radiation curable material so as to re-open said first pre-selected subset of microcups, and
- (f) filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or a liquid crystal display composition.

73. (previously presented)

The process of Claim 72 wherein said radiation curable material is a positively working photoresist.

74. (currently amended)

The process of Claim 72 further comprising the steps of filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or liquid crystal display composition and step of sealing said filled first pre-selected subset of microcups.

75. (currently amended)

The process of Claim 74 further comprising the following steps:

- (i) providing a second photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a second pre-selected subset of microcups;
- (ii) selectively exposing said radiation curable material to radiation through said photomask loop passing radiation through a portion of said second photomask loop onto the radiation curable material laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said portion of said second photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material and leaving another portion of said radiation curable material unexposed; and
- (iii) removing said exposed radiation curable material so as to re-open said second pre-selected subset of microcups, and

- (iv) filling said re-opened second pre-selected subset of microcups with a second electrophoretic display pigment/solvent composition or a liquid crystal display composition.

76. (currently amended)

The process of Claim 75 further comprising the ~~steps of filling said re-opened second pre-selected subset of microcups with a second electrophoretic display pigment/solvent composition or liquid crystal display composition and step of sealing said filled second pre-selected subset of microcups.~~

77. (currently amended)

The process of Claim 76 further comprising the following steps:

- (i) providing a third photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a third pre-selected subset of microcups;
- (ii) ~~selectively exposing said radiation curable material to radiation through said photomask loop passing radiation through a portion of said third photomask loop onto the radiation curable material laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said portion of said third photomask loop through which the radiation passes, for imagewise exposure of a portion of said radiation curable material and leaving another portion of said radiation curable material unexposed; and~~
- (iii) removing said exposed radiation curable material so as to re-open said third pre-selected subset of microcups, and
- (iv) filling said re-opened third pre-selected subset of microcups with a third electrophoretic display pigment/solvent composition or a liquid crystal display composition.

78. (currently amended)

The process of Claim 77 further comprising the ~~steps of filling said re-opened third pre-selected subset of microcups with a third electrophoretic display~~

~~pigment/solvent composition or liquid crystal display composition and step of sealing the filled third pre-selected subset of microcups.~~

79. (previously presented)

The process of Claim 78 further comprising laminating said sealed first, second and third subsets of microcups with a top laminate.

80. (currently amended)

A process for the preparation of a multi-color display, which process comprises:

- (a) providing a support web which comprises a plurality of pre-formed microcups with top openings;
- (b) laminating a layer of a positively working photoresist over said top openings of said microcups;
- (c) providing a first photomask as a continuous loop which comprises a pattern having areas of transparent and areas of opacity and said areas of transparency correspond in form to said top openings of a first pre-selected subset of microcups;
- (d) selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop passing radiation through a portion of said first photomask loop onto the positively working photoresist laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said first photomask loop through which the radiation passes, for imagewise exposure of said positively working photoresist through said areas of transparency of said first photomask loop and leaving the positively working photoresist corresponding to said areas of opacity of said first photomask loop unexposed; and
- (e) removing said exposed positively working photoresist so as to re-open said first pre-selected subset of microcups, and

- (f) filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or a liquid crystal display composition.

81. (currently amended)

The process of Claim 80 further comprising the steps of filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or liquid crystal display composition and step of sealing said filled first pre-selected subset of microcups.

82. (currently amended)

The process of Claim 81 further comprising the following steps:

- (i) providing a second photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to said top openings of a second pre-selected subset of microcups;
- (ii) selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop passing radiation through a portion of said second photomask loop onto the positively working photoresist laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said second photomask loop through which the radiation passes, for imagewise exposure of said positively working photoresist through said areas of transparency of said second photomask loop and leaving the positively working photoresist corresponding to said areas of opacity of said second photomask loop unexposed; and
- (iii) removing said exposed positively working photoresist so as to re-open said second pre-selected subset of microcups, and
- (iv) filling said re-opened second pre-selected subset of microcups with a second electrophoretic display pigment/solvent composition or a liquid crystal display composition.

83. (currently amended)

The process of Claim 82 further comprising the ~~steps of filling said re-opened second pre-selected subset of microcups with a second electrophoretic display pigment/solvent composition or liquid crystal display composition step of~~ and sealing said filled second pre-selected subset of microcups.

84. (currently amended)

The process of Claim 83 further comprising the following steps:

- (i) providing a third photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to said top openings of a third pre-selected subset of microcups;
- (ii) ~~selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop passing radiation through a portion of said third photomask loop onto the positively working photoresist laminated over said top openings of said microcups on a portion of said support web, which is in generally parallel orientation to said third photomask loop through which the radiation passes, for imagewise exposure of said positively working photoresist through said areas of transparency of said third photomask loop and leaving the positively working photoresist corresponding to said areas of opacity of said third photomask loop unexposed; and~~
- (iii) removing said exposed positively working photoresist so as to re-open said third pre-selected subset of microcups, and
- (iv) filling said re-opened third pre-selected subset of microcups with a third electrophoretic display pigment/solvent composition or a liquid crystal display composition.

85. (currently amended)

The process of Claim 84 further comprising the ~~steps of filling said re-opened third pre-selected subset of microcups with a third electrophoretic display~~

~~pigment/solvent composition or liquid crystal display composition and step of sealing said filled third pre-selected subset of microcups.~~

86. (previously presented)

The process of Claim 85 further comprising laminating over said sealed first, second and third subsets of microcups with a top laminate for addressing said microcups.

87. (previously presented)

The process of Claim 86 wherein said top laminate is coated with an adhesive.

88. (currently amended)

A photolithographic process comprising imagewise exposure through a moving photomask synchronized with a moving web substrate wherein said web substrate comprises indium-tin oxide (ITO) on PET (polyethylene terephthalate), PEN (polyethylene naphthalate) or polycarbonate and said ITO indium-tin oxide is coated with a radiation curable material and said imagewise exposure is accomplished by passing radiation through a portion of said photomask onto said radiation curable material coated on said indium-tin oxide on said web substrate which is in generally parallel orientation to said portion of said photomask through which the radiation passes.

89. (previously presented)

The process of Claim 88 wherein said radiation curable material is a positively working photoresist.

90. (currently amended)

The process of Claim 89 wherein said web substrate is ITO/PET indium-tin oxide/polyethylene terephthalate coated with a positively working photoresist.

91. (currently amended)

The process of Claim 90 wherein the positively working photoresist is developed after exposure and the ITO/PET indium-tin oxide/polyethylene terephthalate is etched to expose discrete patterns.

92. (previously presented)

The process of Claim 91 wherein said positively working photoresist is stripped.

93. (new)

The process of Claim 59 wherein said elements are conductor lines.

94. (new)

The process of Claim 53, wherein in step (f), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

95. (new)

The process of Claim 55, wherein in step (d), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

96. (new)

The process of Claim 59, wherein in step (f), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

97. (new)

The process of Claim 67, wherein in step (f), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

98. (new)

The process of Claim 72, wherein in step (d), radiation is passed through the portion of said first photomask loop directly onto the radiation curable material.

99. (new)

The process of Claim 75, wherein in step (ii), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

100. (new)

The process of Claim 77, wherein in step (ii), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

101. (new)

The process of Claim 80, wherein in step (d), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

102. (new)

The process of Claim 82, wherein in step (ii), radiation is passed through the portion of said photomask loop directly onto the radiation curable material.

103. (new)

The process of Claim 84, wherein in step (ii), radiation is passed through the portion of said first photomask loop directly onto the radiation curable material.

104. (new)

The photolithographic process of Claim 88, wherein radiation is passed through a portion of said photomask directly onto the radiation curable material.